

| | | | | | |
|----|--|------------------|-------------------|-------------------|----|
| 24 | Business Day | | | 208 NEWS 8:24 pm | 22 |
| | Mon 9/22 8:00 pm - 9:00 pm | | | | |
| 26 | Today's business news and information. CEO Jeffrey Jones; travel industry | | | | 20 |
| | Mon 9/22 | 8:00 pm | 8:30 pm | 9:00 pm | |
| | 204 SPRT | Sports Central | | NFL Preview | 14 |
| | 208 NEWS | Business Day | | News | |
| | 209 HOME | Design at Home | | Decorating | |
| | 243 LA 13 | Giants @ Dodgers | | Postgame Show | |
| | 254 LA 24 | Business Report | Today in Politics | Roundtable | |
| | 258 LA 28 | Nexus | | Natural World | |
| | 280 LA 50 | Auto World | Sound Check | The Movie Critics | |
| 18 | 288 LA 58 | Collector's Hour | | Investigation | 16 |

12

Figure 1
Prior Art

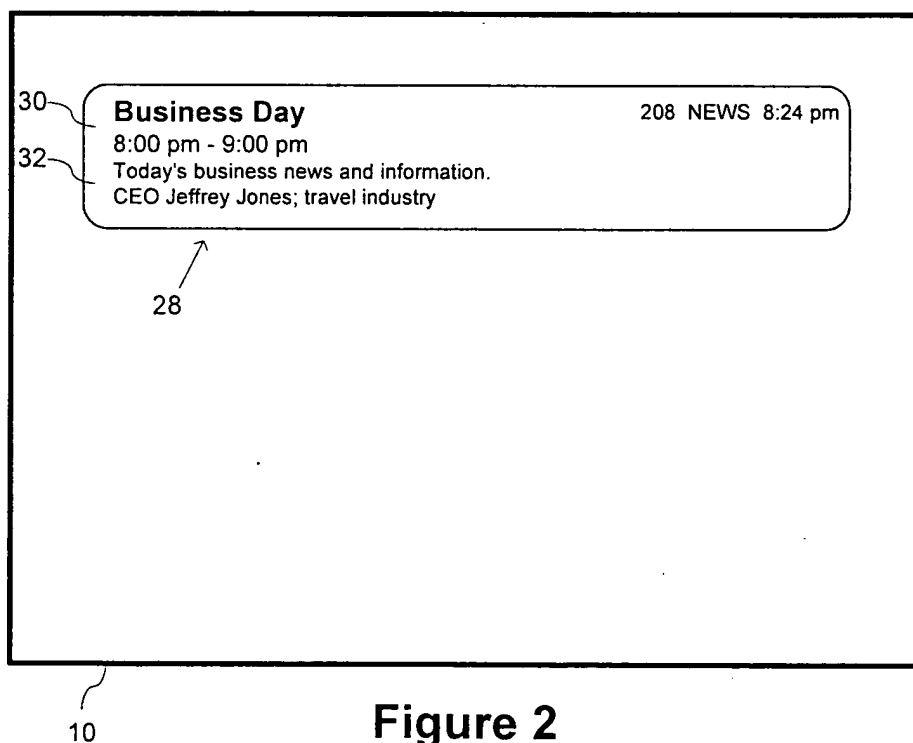


Figure 2
Prior Art

| | |
|-----------------------------|---------------------------------------|
| Program identifier: | 762645819.0405 |
| Program title: | Business Day |
| Type: | Series |
| Genre: | News |
| Series description: | Today's business news and information |
| Program description: | CEO Jeffrey Jones; travel industry |
| Channel: | News Network |
| Date: | 09/22/2003 |
| Time: | 8:00 pm |
| Duration: | 60 min |
| Rating: | General |
| Language: | English |
| Alternate language: | Spanish |
| Closed caption: | Yes |
| Audio type: | Stereo |

Conventional program metadata

Figure 3
Prior Art

| | | | |
|-----------------------------|---------------------------------------|--|--|
| Program identifier: | 762645819.0405 | | |
| Program title: | Business Day | | |
| Program description: | Today's business news and information | | |
| Channel: | News Network | | |
| Date: | 09/22/2003 | | |
| Time: | 8:00 pm | | |
| Duration: | 60 min | | |
| Rating: | General | | |
| Language: | English | | |
| Alternate language: | Spanish | | |
| Closed caption: | Yes | | |
| Audio type: | Stereo | | |
| Categories: | news,8; business,9; investment,8; ... | | |
| Keywords: | Federal Reserve; interest rates; ... | | |
| Actors: | | | |
| Director: | | | |

Program metadata

| | | | |
|-----------------------------|--|--|--|
| Program identifier: | 762645819.0405 | | |
| Program title: | Business Day | | |
| Segment identifier: | 762645819.0405.0004 | | |
| Segment title: | Earnings reports | | |
| Segment description: | IBM, Dell, Cisco; analyst comments | | |
| Channel: | News Network | | |
| Date: | 09/22/2003 | | |
| Time: | 8:22 pm | | |
| Duration: | 8 min | | |
| Rating: | General | | |
| Language: | English | | |
| Alternate language: | Spanish | | |
| Closed caption: | Yes | | |
| Audio type: | Stereo | | |
| Categories: | news,8; business,9; earnings,10; technology,7; ... | | |
| Keywords: | IBM; Dell; Cisco; analyst; ... | | |
| Actors: | | | |
| Director: | | | |

Segment metadata

Figure 4

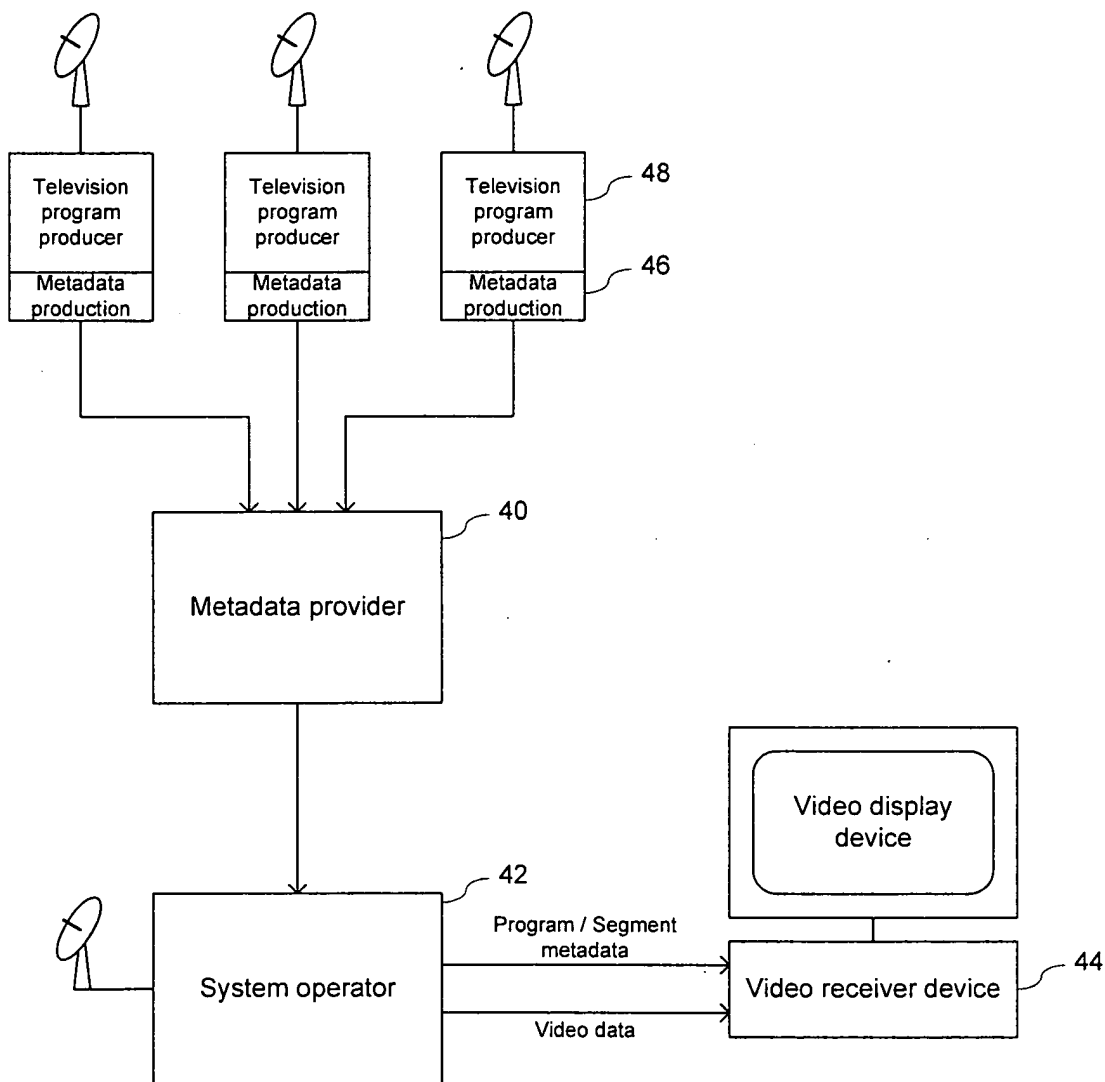


Figure 5

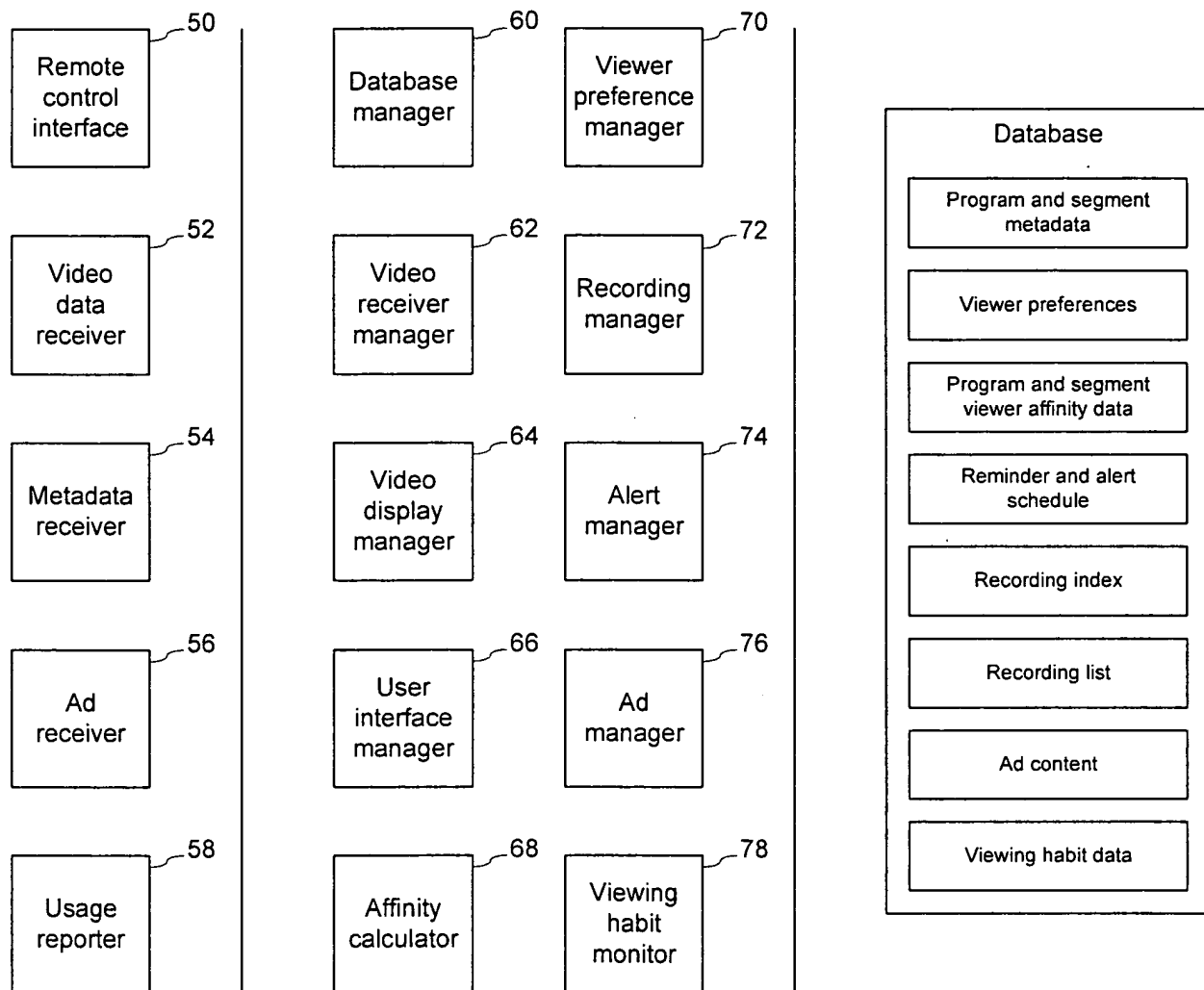


Figure 6

| <u>User Command</u> | <u>Device Response</u> |
|------------------------------|---|
| Display guide | <ul style="list-style-type: none">▪ Retrieve metadata objects within a given time and channel range▪ Assemble and display guide:<ul style="list-style-type: none">▪ form program / segment grid▪ display cursor in current program / segment in grid▪ display program description in program window▪ display segment description in segment window |
| Move cursor | <ul style="list-style-type: none">▪ Retrieve additional metadata objects and update grid, if necessary▪ Display cursor in new program/segment in grid▪ Update contents of program and segment windows |
| Select program or segment | <ul style="list-style-type: none">▪ If the cursor is located on a current program or segment, tune to the channel of the program or segment▪ If the cursor is on a future program or segment:<ul style="list-style-type: none">▪ if the cursor is on a segment, display option to remind for whole program or segment only, and receive selection▪ schedule reminder for segment or program |
| Record | <ul style="list-style-type: none">▪ If the cursor is on a current program or segment<ul style="list-style-type: none">▪ if the cursor is on a segment, display option to record whole program or segment only and receive selection▪ begin recording▪ If the cursor is on a future program or segment:<ul style="list-style-type: none">▪ if the cursor is on a segment, display option to record whole program or segment only and receive selection▪ schedule recording▪ If the cursor is on a program or segment has already aired and that is buffered<ul style="list-style-type: none">▪ if the cursor is on a segment and the whole program is buffered, display option to store the whole program or segment only and receive selection▪ store whole program or segment as recorded content |

Figure 7a

User Command

Device Response

| | |
|---------------------|---|
| Filter | <ul style="list-style-type: none">▪ Present user interface for selecting filtering criteria▪ Receive filtering criteria▪ Retrieve metadata objects based on filtering criteria▪ Assemble and display filtered guide |
| Find more like this | <ul style="list-style-type: none">▪ Retrieve program and segment metadata having categories, keywords, actors or directors in common with a program or segment on which the cursor is located▪ Display information about the retrieved programs and segments <p>OR</p> <ul style="list-style-type: none">▪ Display user interface showing categories, keywords, actors and directors of the program or segment on which the cursor is located▪ Receive input specifying which categories, keywords, actors and directors are of interest▪ Retrieve program and segment metadata having the specified categories, keywords, actors or directors▪ Display information about the retrieved programs and segments |
| Update preferences | <ul style="list-style-type: none">▪ Update viewer preferences to reflect approval or disapproval of categories, keywords, actors or directors of a program or segment on which the cursor is located <p>OR</p> <ul style="list-style-type: none">▪ Display user interface showing categories, keywords, actors and directors of the program or segment on which the cursor is located▪ Receive input specifying which categories, keywords, actors and directors are approved or disapproved▪ Update viewer preferences to reflect approval or disapproval of specified categories, keywords, actors or directors |

Figure 7b

| | | | | | |
|--|------------------|-------------------|-------------------|-------------------|----|
| Business Day: Today's business news and information. Mon 9/22 8:00 pm - 9:00 pm | | | | 8:27 pm Ch 208 | 88 |
| Segment: Earnings Reports: IBM, Dell, Cisco; analyst comments Start: 8:22 Duration: 8 min | | | | | |
| Mon 9/22 | 8:00 pm | 8:30 pm | 9:00 pm | | 86 |
| 204 SPRT | Sports Central | | NFL Preview | | |
| 208 NEWS | | Business Day | News | | 80 |
| 209 HOME | Design at Home | | Decorating | | |
| 243 LA 13 | Giants @ Dodgers | | Postgame Show | | |
| 254 LA 24 | Business Report | Today in Politics | Roundtable | | |
| 258 LA 28 | Nexus | | Natural World | | |
| 280 LA 50 | Auto World | Sound Check | The Movie Critics | | |
| 288 LA 58 | Collector's Hour | | Investigation | | |

Figure 8a

| | | | | | |
|--|------------------|-------------------|-------------------|-------------------|----|
| Business Day: Today's business news and information. Mon 9/22 8:00 pm - 9:00 pm | | | | 8:27 pm Ch 208 | 88 |
| Segment: CEO Interview: Jeffrey Jones of Synthesco Start: 8:30 Duration: 16 min | | | | | |
| Mon 9/22 | 8:00 pm | 8:30 pm | 9:00 pm | | 86 |
| 204 SPRT | Sports Central | | NFL Preview | | |
| 208 NEWS | | Business Day | News | | 80 |
| 209 HOME | Design at Home | | Decorating | | |
| 243 LA 13 | Giants @ Dodgers | | Postgame Show | | |
| 254 LA 24 | Business Report | Today in Politics | Roundtable | | |
| 258 LA 28 | Nexus | | Natural World | | |
| 280 LA 50 | Auto World | Sound Check | The Movie Critics | | |
| 288 LA 58 | Collector's Hour | | Investigation | | |

Figure 8b

INTERACTIVE PROGRAM BANNERS PROVIDING PROGRAM SEGMENT
INFORMATION

Inventors: Gil Gavriel DUDKIEWICZ et al.

Attorney: Ronald Coslick - 051448-0210

FOLEY & LARDNER - (310) 277-2223

Sheet 9 of 19

| | | | | | |
|--|------------------|-------------------|-------------------|-------------------|----|
| Business Day: Today's business news and information. Mon 9/22 8:00 pm - 9:00 pm | | | | 8:27 pm Ch 208 | 88 |
| Segment: Earnings Reports: IBM, Dell, Cisco; analyst comments Start: 8:22 Duration: 8 min | | | | | |
| Mon 9/22 | 8:00 pm | 8:30 pm | 9:00 pm | | 86 |
| 204 SPRT | Sports Central | | NFL Preview | | |
| 208 NEWS | Business Day | | News | | 80 |
| | | | | 92 | |
| 209 HOME | Design at Home | | Decorating | | |
| 243 LA 13 | Giants @ Dodgers | | Postgame Show | | |
| 254 LA 24 | Business Report | Today in Politics | Roundtable | | |
| 258 LA 28 | Nexus | | Natural World | | |
| 280 LA 50 | Auto World | Sound Check | The Movie Critics | | |
| 288 LA 58 | Collector's Hour | | Investigation | | |

Figure 9a

| | | | | | |
|--|------------------|-------------------|-------------------|-------------------|----|
| Business Day: Today's business news and information. Mon 9/22 8:00 pm - 9:00 pm | | | | 8:27 pm Ch 208 | 88 |
| Segment: CEO Interview: Jeffrey Jones of Synthesco Start: 8:30 Duration: 16 min | | | | | |
| Mon 9/22 | 8:00 pm | 8:30 pm | 9:00 pm | | 86 |
| 204 SPRT | Sports Central | | NFL Preview | | |
| 208 NEWS | Business Day | | News | | 80 |
| | | | | 92 | |
| 209 HOME | Design at Home | | Decorating | | |
| 243 LA 13 | Giants @ Dodgers | | Postgame Show | | |
| 254 LA 24 | Business Report | Today in Politics | Roundtable | | |
| 258 LA 28 | Nexus | | Natural World | | |
| 280 LA 50 | Auto World | Sound Check | The Movie Critics | | |
| 288 LA 58 | Collector's Hour | | Investigation | | |

Figure 9b

INTERACTIVE PROGRAM BANNERS PROVIDING PROGRAM SEGMENT
INFORMATION

Inventors: Gil Gavriel DUDKIEWICZ et al.
Attorney: Ronald Coslick - 051448-0210
FOLEY & LARDNER - (310) 277-2223
Sheet 10 of 19

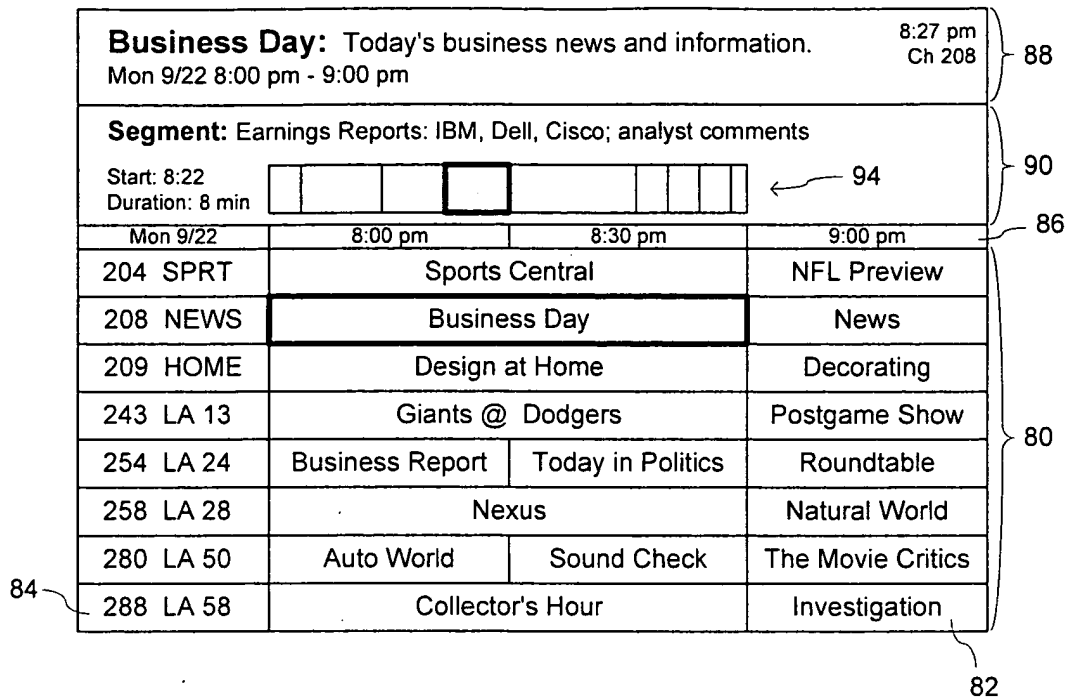


Figure 10a

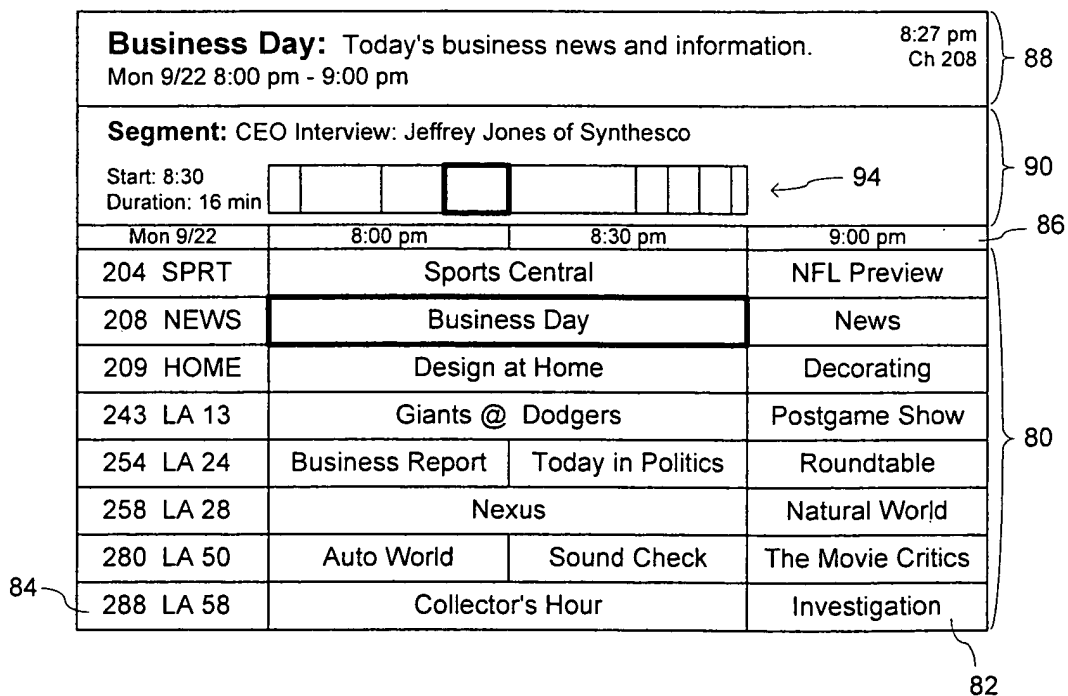


Figure 10b

INTERACTIVE PROGRAM BANNERS PROVIDING PROGRAM SEGMENT
INFORMATION

Inventors: Gil Gavriel DUDKIEWICZ et al.
Attorney: Ronald Coslick - 051448-0210
FOLEY & LARDNER - (310) 277-2223
Sheet 11 of 19

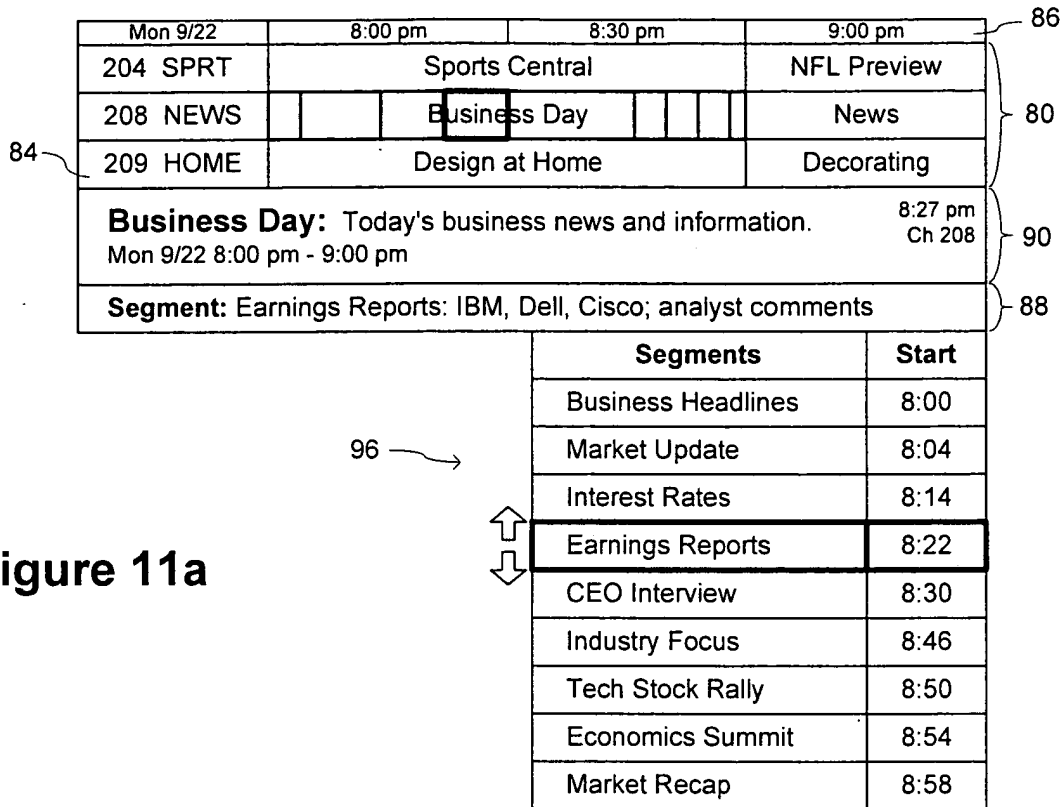


Figure 11a

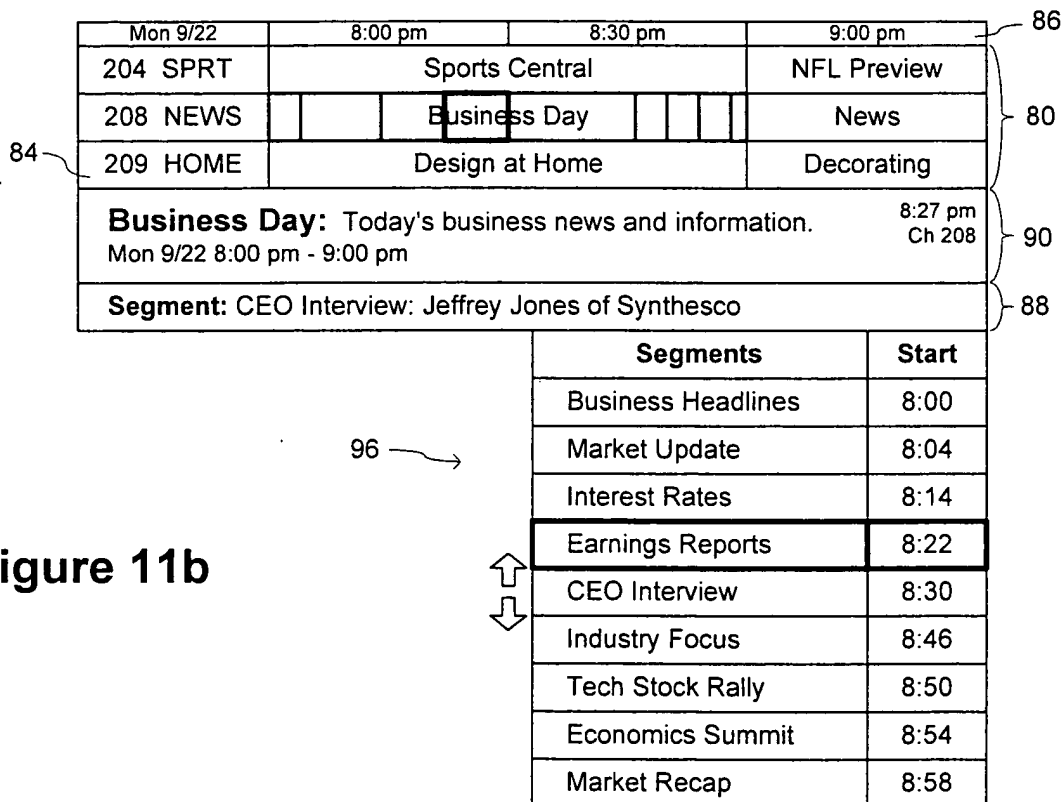


Figure 11b

User Command

Device Response

Display banner

- Retrieve metadata objects for the current time period and channel
- Assemble and display the banner:
 - form segment fields
 - display cursor in the current segment field
 - display program description in the banner
 - display segment description in the banner

Move cursor

- Display cursor in new segment field
- display segment description of new segment

Select

- Schedule a reminder for the segment on which the cursor is located

Record

- Display option to record whole program or segment only and receive selection
 - if viewer selects record whole program, begin recording and store any buffered portion
 - if viewer selects record segment and segment is current, begin recording
 - if viewer selects record segment and segment is future, schedule recording
 - if viewer selects record segment and segment is buffered, store segment as recorded content

Figure 12a

User Command

Device Response

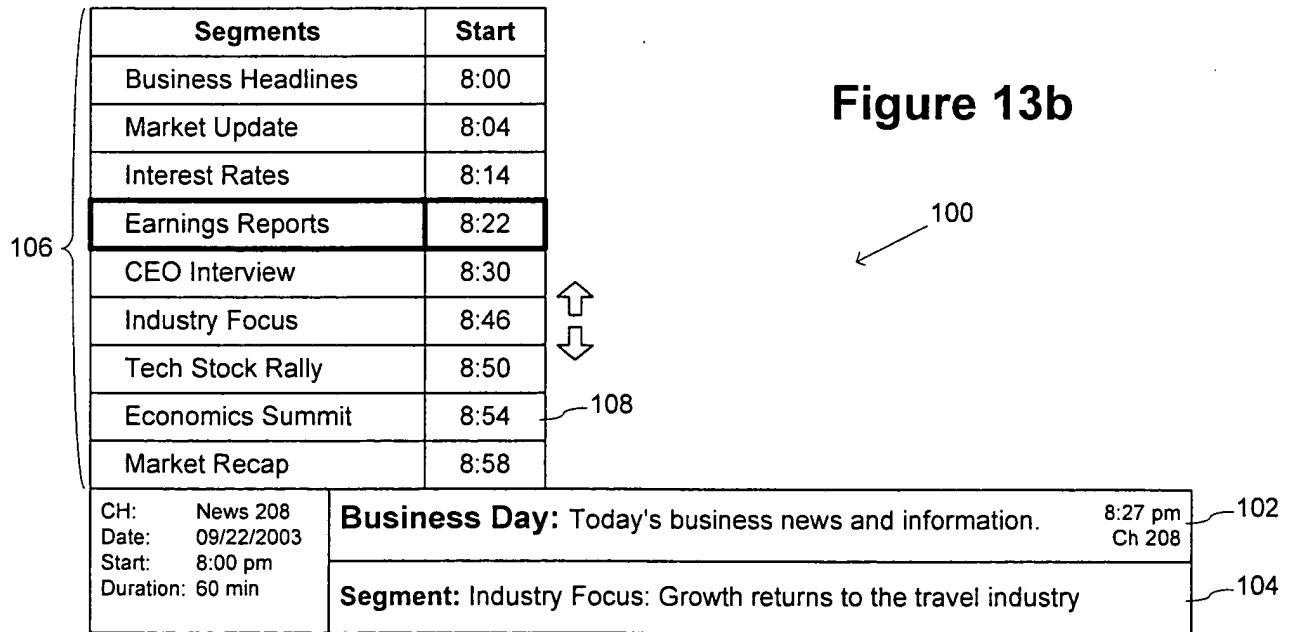
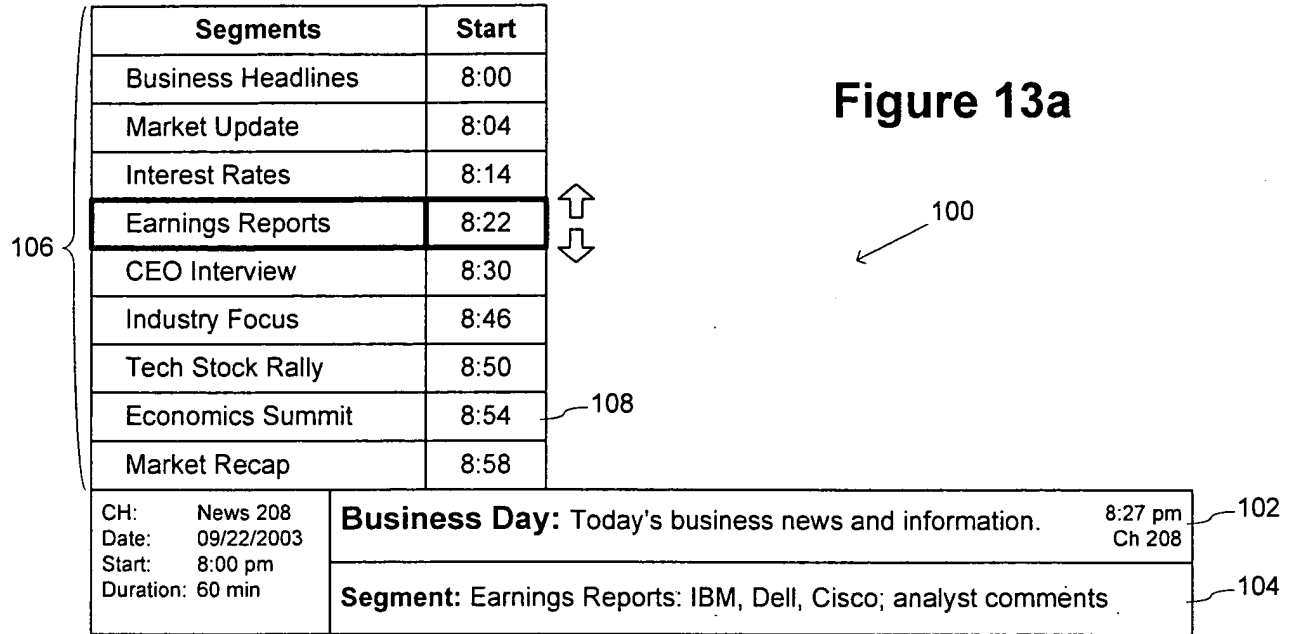
Find more like this

- Retrieve program and segment metadata having categories, keywords, actors or directors in common with a segment on which the cursor is located
- Display information about the retrieved programs and segments
- OR
- Display user interface showing categories, keywords, actors and directors of the segment on which the cursor is located
- Receive input specifying which categories, keywords, actors and directors are of interest
- Retrieve program and segment metadata having the specified categories, keywords, actors or directors
- Display information about the retrieved programs and segments

Update preferences

- Update viewer preferences to reflect approval or disapproval of categories, keywords, actors or directors of a segment on which the cursor is located
- OR
- Display user interface showing categories, keywords, actors and directors of the segment on which the cursor is located
- Receive input specifying which categories, keywords, actors and directors are approved or disapproved
- Update viewer preferences to reflect approval or disapproval of specified categories, keywords, actors or directors

Figure 12b



| Business Day: Today's business news and information. Mon. 9/22 8:00 pm - 9:00 pm | | 8:27 pm Ch 208 | 102 |
|--|--|-------------------|-----|
| Start | Segments | | 106 |
| 8:14 | Interest Rates: Federal reserve meeting and analysis | | |
| 8:22 | Earnings Reports: IBM, Dell, Cisco, analyst comments | | |
| 8:30 | CEO Interview: Jeffrey Jones of Synthesco | | 108 |

Figure 14a

| Business Day: Today's business news and information. Mon. 9/22 8:00 pm - 9:00 pm | | 8:27 pm Ch 208 | 102 |
|--|---|-------------------|-----|
| Start | Segments | | 106 |
| 8:22 | Earnings Reports: IBM, Dell, Cisco, analyst comments | | |
| 8:30 | CEO Interview: Jeffrey Jones of Synthesco | | |
| 8:46 | Industry Focus: Growth returns to the travel industry | | 108 |

Figure 14b

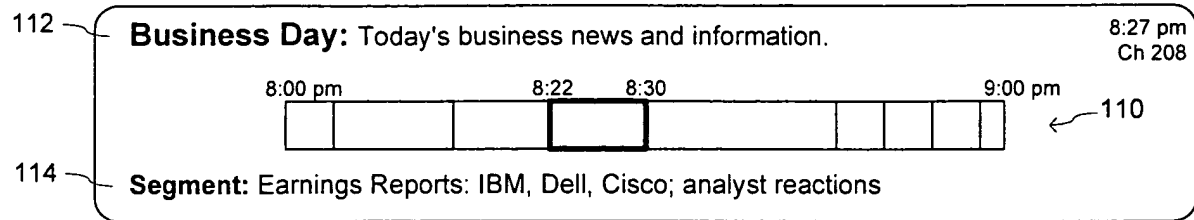


Figure 15a

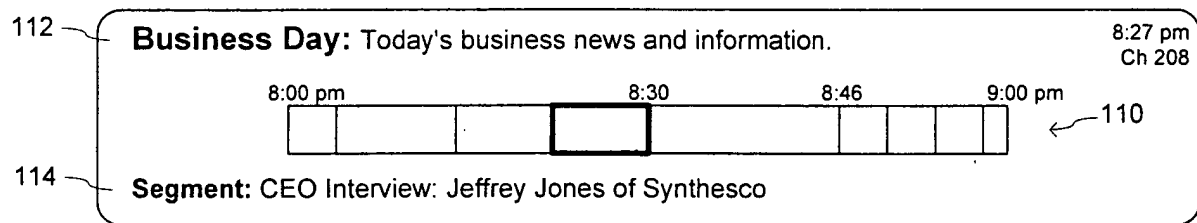


Figure 15b

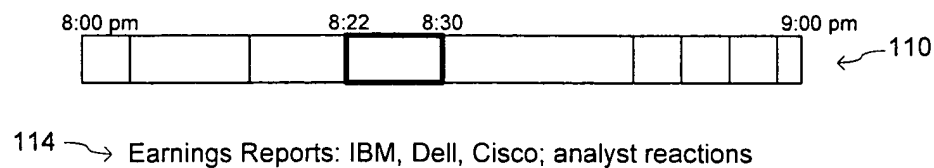


Figure 16a

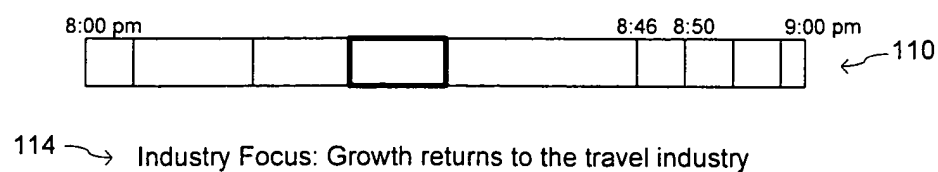


Figure 16b

INTERACTIVE PROGRAM BANNERS PROVIDING PROGRAM SEGMENT
INFORMATION

Inventors: Gil Gavriel DUDKIEWICZ et al.
Attorney: Ronald Coslick - 051448-0210
FOLEY & LARDNER - (310) 277-2223
Sheet 17 of 19

| | | | | | | | | |
|----|--|------------------|--|-------------------|--|-------------------|------------------------|-----|
| 88 | Business Day: Today's business news and information. Mon 9/22 8:00 pm - 9:00 pm | | | | | | 8:27 pm Ch 208 | |
| 90 | Segment: Earnings Reports: IBM, Dell, Cisco; analyst comments Start: 8:22 Duration: 8 min | | | | | | ★★★ Earnings IBM | 116 |
| | Mon 9/22 | 8:00 pm | | 8:30 pm | | 9:00 pm | | 86 |
| | 204 SPRT | Sports Central | | | | NFL Preview | | 80 |
| | 208 NEWS | | | Business Day | | | News | |
| | 209 HOME | Design at Home | | | | Decorating | | |
| | 243 LA 13 | Giants @ Dodgers | | | | Postgame Show | | |
| | 254 LA 24 | Business Report | | Today in Politics | | Roundtable | | |
| | 258 LA 28 | Nexus | | | | Natural World | | |
| | 280 LA 50 | Auto World | | Sound Check | | The Movie Critics | | |
| 84 | 288 LA 58 | Collector's Hour | | | | Investigation | | |

Figure 17a

88 { **Business Day:** Today's business news and information. 8:27 pm
Mon 9/22 8:00 pm - 9:00 pm Ch 208

90 { **Segment:** CEO Interview: Jeffrey Jones of Synthesco ★
Start: 8:30 Business
Duration: 16 min

| Mon 9/22 | 8:00 pm | 8:30 pm | 9:00 pm |
|-----------|------------------|-------------------|-------------------|
| 204 SPRT | Sports Central | | NFL Preview |
| 208 NEWS | | Business Day | News |
| 209 HOME | Design at Home | | Decorating |
| 243 LA 13 | Giants @ Dodgers | | Postgame Show |
| 254 LA 24 | Business Report | Today in Politics | Roundtable |
| 258 LA 28 | Nexus | | Natural World |
| 280 LA 50 | Auto World | Sound Check | The Movie Critics |
| 288 LA 58 | Collector's Hour | | Investigation |

86 {

80 {

84 {

116 {

82

Figure 17b

INTERACTIVE PROGRAM BANNERS PROVIDING PROGRAM SEGMENT
INFORMATION

Inventors: Gil Gavriel DUDKIEWICZ et al.

Attorney: Ronald Coslick - 051448-0210

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| | | | | | | |
|------------------|------------------------|---|---|-----|-------------------|-----|
| 106 | Segments | Start | Interest | 118 | 100 | |
| | Peace Talks | 9:00 | | | | |
| | Presidential Campaigns | 9:03 | | | | |
| | Supreme Court Decision | 9:09 | | | | |
| | Business | 9:13 |  | | | |
| | Sports | 9:19 |  | | | |
| | Entertainment | 9:24 | | | | |
| | Weather | 9:28 |  | | | |
| CH: News 208 | | News: The day's news in thirty minutes. | | | 9:14 pm Ch 208 | 102 |
| Date: 09/22/2003 | | | | | | |
| Start: 8:00 pm | | Segment: Business: market recap; tech rally; oil price spike | | | 104 | |
| Duration: 60 min | | | | | | |

Figure 18

Find more like:

Program: Business Day

Segment: Earnings Reports

124 **Find**

Category:

☐ News

☒ Business

☐ Earnings

☒ Technology

Keyword:

☐ IBM

☒ Dell

☒ Cisco

122

120

Figure 19

134 Approve 136 Disapprove

Category: Keyword:

☐ News ☒ IBM 132

☐ Business ☒ Dell

☐ Earnings ☒ Cisco

☐ Technology

130

Figure 20a

Categories: 1 2 3 4 5 6 7 8 9 10

News ☐ 138

Business ☐ 138

Earnings ☐

Technology ☐

Keywords:

IBM ☒ Cisco ☒ 132

Dell ☒ 140 Update

130

Figure 20b